TM 11-2581

WAR DEPARTMENT TECHNICAL MANUAL

PLOTTING EQUIPMENT AN/TSA-1

RESTRICTED. DISSEMINATION OF RESTRICTED MATTER. No person is entitled solely by virtue of his grade or position to knowledge or possession of classified matter. Such matter is entrusted only to those individuals whose official duties require such knowledge or possession. (See also par. 23b, AR 380-5, 15 Mar 1944.)

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WAR DEPARTMENT,
WASHINGTON 25, D. C., 4 July 1945.

TM 11-2581, Plotting Equipment AN/TSA-1, is published for the information and guidance of all concerned.

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OFFICIAL:

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Refer to FM 21-6 for explanation of distribution formula.

TABLE OF CONTENTS

PART ONE. Introduction.

Section I. Description of Plotting Equipment AN/TSA-1.

	Paragraph	*Page*
General	1	1
Application	2	1
Table of components	3	2
Case CY-327/TSA	4	4
Plotting Table FN-4/TSA	5	5
Plotting Table FN-8/TSA	6	5
Case CY-394/TSA	7	6
Plotting Tables FN-9/TSA	8	6
Case CY-283/TTQ	9	6
Clock	10	11
Plotting Kit PT-12/TSA-1	11	11
Jacks and plugs	12	11
Miscellaneous plotting equipment	13	11

II. Installation and assembly.

Siting	14	11
Unpacking, uncrating, and checking	15	12
Assembly of plotting tables	16	15
Assembly of platform and Platform Table FN-2/TTQ	17	15
Packing for transportation	18	17

PART TWO. Operating instructions.

Section III. Preliminary procedure.

Plotting table preparation	19	20
Status or situation board preparation	20	20
Preparing clock for use	21	21
Preparing plotting kit for use	22	22

IV. Operation of Plotting Equipment AN/TSA-1.

Tactical operation	23	22

TABLE OF CONTENTS

		Paragraph	Page
PART THREE. Maintenance instructions.			
Section V.	Preventive maintenance procedures.		
	Meaning of preventive maintenance	24	23
	Description of preventive maintenance techniques	25	23
	Instructions	26	23
VI.	Lubrication.		
VII.	Moistureproofing and fungiproofing.		
PART FOUR. Auxiliary equipment (not used).			
PART FIVE. Repair instructions.			
Section VIII.	Repair.		
	General repair	27	26
	Unsatisfactory Equipment Report	28	26
APPENDIX.			
Section IX.	References.		
	Parts list	29	28
	Shipping instructions	30	28
	Decontamination	31	28
	Demolition	32	28
	Other publications	33	28
X.	Maintenance parts.		
	Maintenance parts for Plotting Equipment AN/TSA-1	34	29

DESTRUCTION NOTICE

WHY — To prevent the enemy from using or salvaging this equipment for his benefit.

WHEN —When ordered by your commander.

HOW — 1. Smash — Use sledges, axes, handaxes, pickaxes, hammers, crowbars, heavy tools.

2. Cut — Use axes, handaxes, machetes.

3. Burn — Use gasoline, kerosene, oil, flame throwers, incendiary grenades.

4. Explosives — Use firearms, grenades, TNT.

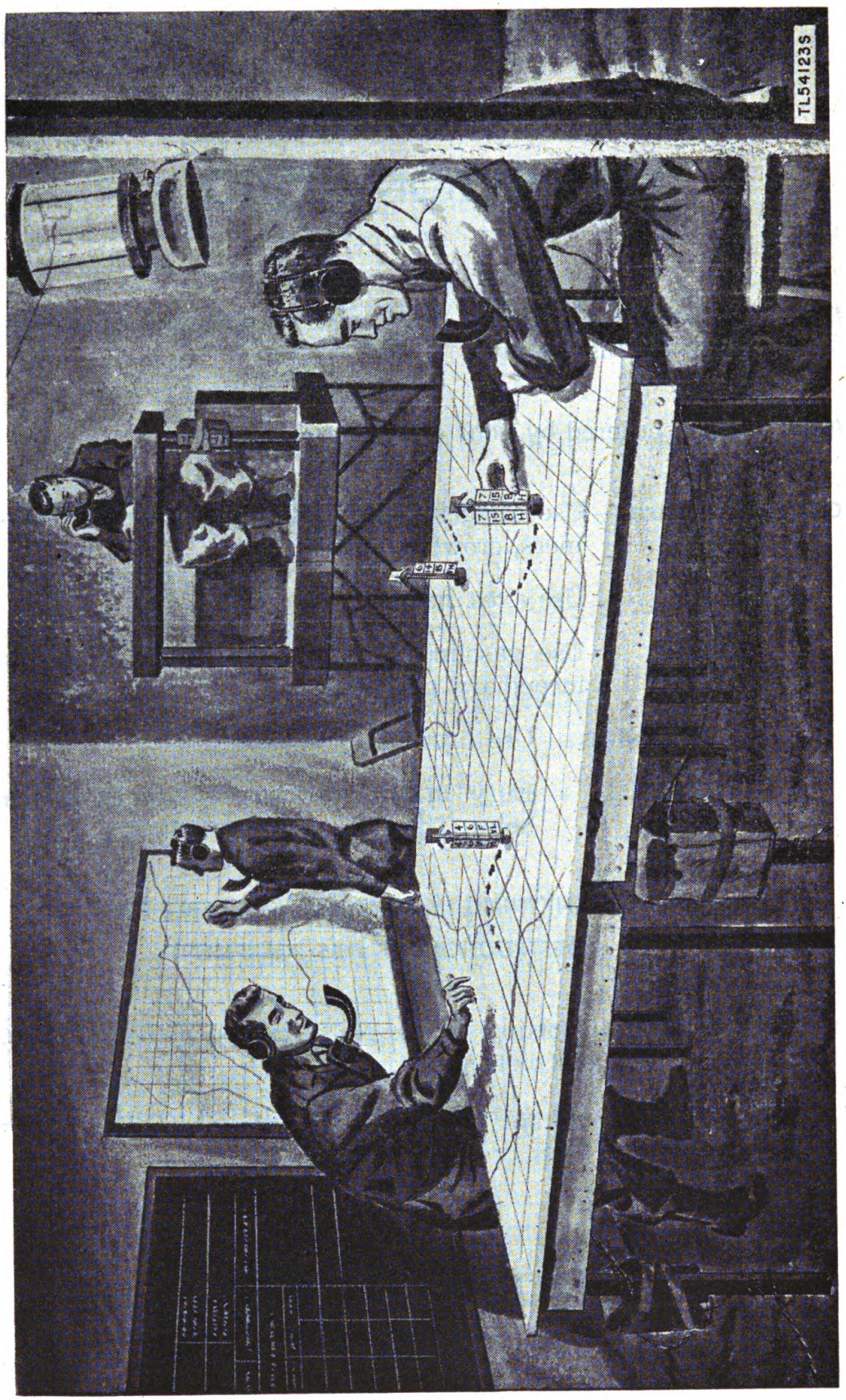
5. Disposal — Bury in slit trenches, fox holes, other holes. Throw in streams. Scatter.

USE ANYTHING IMMEDIATELY AVAILABLE FOR DESTRUCTION OF THIS EQUIPMENT

WHAT —1. Smash — Plotting tables, platform and platform table, and plotting kit.

2. Burn — All parts of the equipment and technical manuals.

DESTROY EVERYTHING



Frontispiece.

PART ONE

INTRODUCTION

SECTION I

DESCRIPTION OF PLOTTING EQUIPMENT AN/TSA-1

1. GENERAL.

Plotting Equipment AN/TSA-1 consists of four portable plotting tables, a platform and platform table, a clock, a plotting kit, and various colored paints and other material needed to plot flights of friendly and hostile aircraft. Case CY-283/TTQ comprises the platform and Platform Table FN-2/TTQ. Case CY-394/TSA comprises two Plotting Tables FN-9/TSA with the addition of end pieces; and Case CY-327/TSA, Plotting Tables FN-4/TSA and FN-8/TSA with the addition of end pieces. The end pieces may be used as benches when the equipment is set up for operation. The plotting equipment is packed in the under side of the plotting tables for ease in transportation.

2. APPLICATION.

Plotting Equipment AN/TSA-1 is used for displaying intelligence concerning aerial activities in an area. It is used by antiaircraft artillery gun and searchlight battalions for an antiaircraft operations room (AAOR) in conjunction with radio and telephone equipment issued separately.

3. TABLE OF COMPONENTS.

Component	Quantity	Height (in.)	Depth (in.)	Length (in.)	Width (in.)	Weight (lb)	Volume (cu ft)
Case 1 (Case CY-327/TSA) includes:	1	48	12		48	255	16
Plotting Table FN-4/TSA with the following:	1		5-1/2	47-5/8	47-5/8	111	
Plotting Kit PT-12/TSA-1	1	4-7/8		17-5/16	10-5/16		
Carpenter aprons	5						
Paint, casein, white	4 qts						
Paint, casein, blue	2 qts						
Paint, casein, green	2 qts						
Scotch tape	2 rolls			1800	1		
Plotting Table FN-8/TSA with the following:	1		5-1/2	47-5/8	47-5/8	84	
Chalk, white	1 box						
Chalk, assorted colors	1 box						
Ink, India	2 cans						
Cellulose, acetate	1 roll			600	40		
Cloth, blackboard	1 roll			48	40		
Miscellaneous supplies box with the following:							
Brush, varnish	2				4		
Brush, varnish	2				1		
Brush, lettering	2				1/4		

Pencil, China, black	12						
Pencil, China, blue	12						
Pencil, China, green	12						
Pencil, China, red	12						
Eraser, blackboard	1						
Stapler	1						
Staples	1	box					
Pins, positioning	1	box					
Case 2 (Case CY-394/TSA) includes:	1		48	12		48	213	16
Plotting Table FN-9/TSA with the following packed in one table:	2			5-1/2	47-5/8	47-5/8	93 (packed table)	
Clock	1							
Paper, drawing	2	rolls			360	42		
Paper, tracing	1	roll			720	40		
Miscellaneous supplies box with the following:								
Jack JK-37	15						0.4	
Plug PL-58	15						0.3	
Case 3 (Case CY-283/TTQ) includes:			24	12		48	134	8
Platform			48		48	48		
Platform Table FN-2/TTQ			28		46	12		

4. CASE CY-327/TSA.

Two end pieces, each 1 foot 6 inches high, 1 foot wide, and 4 feet long, are placed over the Plotting Tables FN-4/TSA and FN-8/TSA which are packed together with the table tops facing each other. The sides of the case are completed by a board, 1 foot wide, hinged

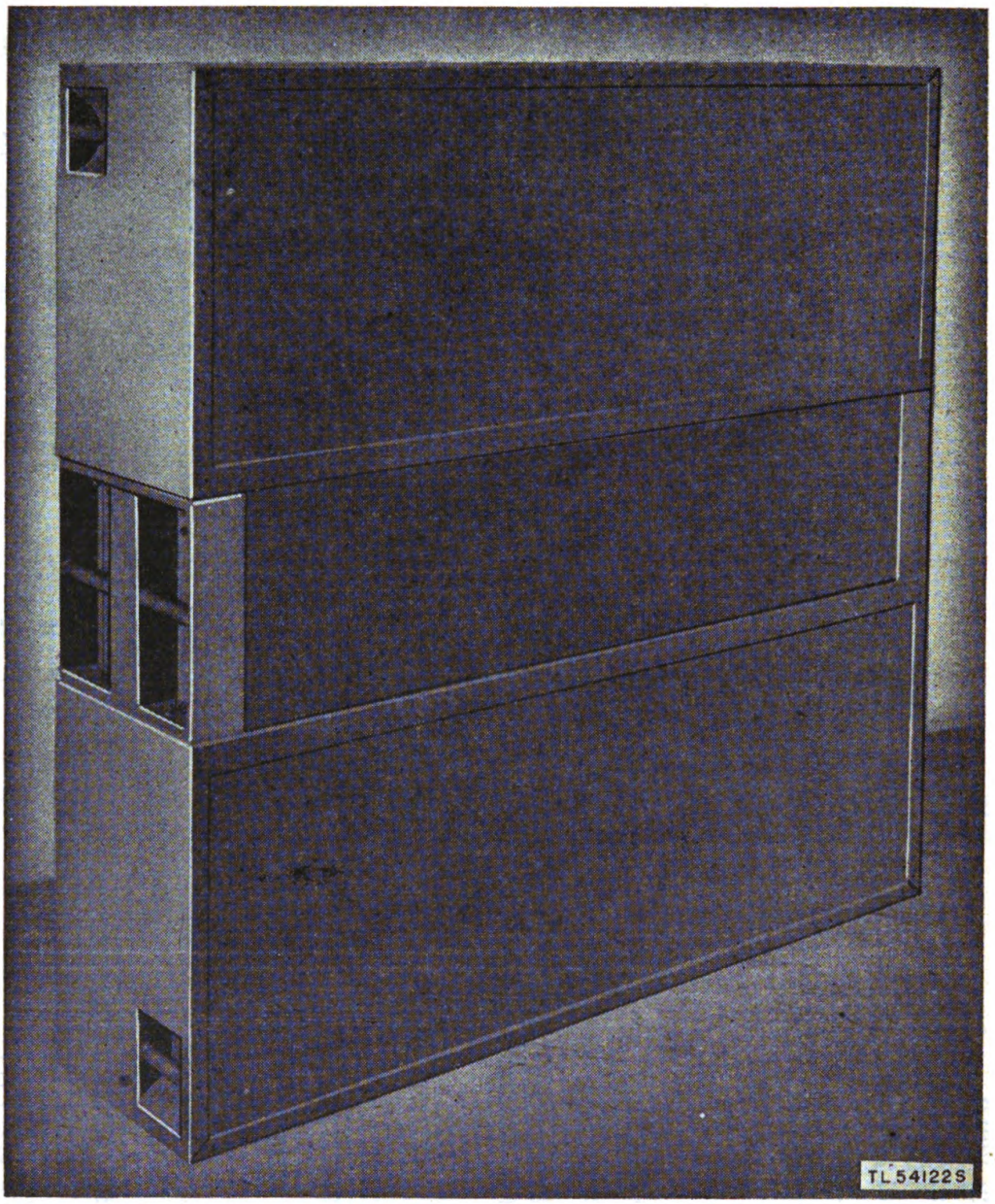


Figure 1. Typical plotting table case.

to the under side of each table. The space between the ends of the two end pieces is covered by removable case handles which also fasten the two plotting tables together. The end pieces may be used as benches when Case CY-327/TSA is disassembled.

5. PLOTTING TABLE FN-4/TSA.

Plotting Table FN-4/TSA is a 4-foot square table with removable legs which provide a 2-foot, 4-inch height. A 5½-inch apron is provided around the under side of the table and the table top overhangs the apron 1¼ inches. The legs fit into sockets in the corners and are fastened by setscrews. A special gray finish on the top of this table permits the use of casein paint to paint maps. The maps may be removed by washing the table tops with water without affecting the basic finish. In the space beneath the table formed by the apron are mounted miscellaneous parts of the plotting equipment. Straps are provided to keep these parts positioned during transportation. The table, less supplies, weighs 60 pounds.

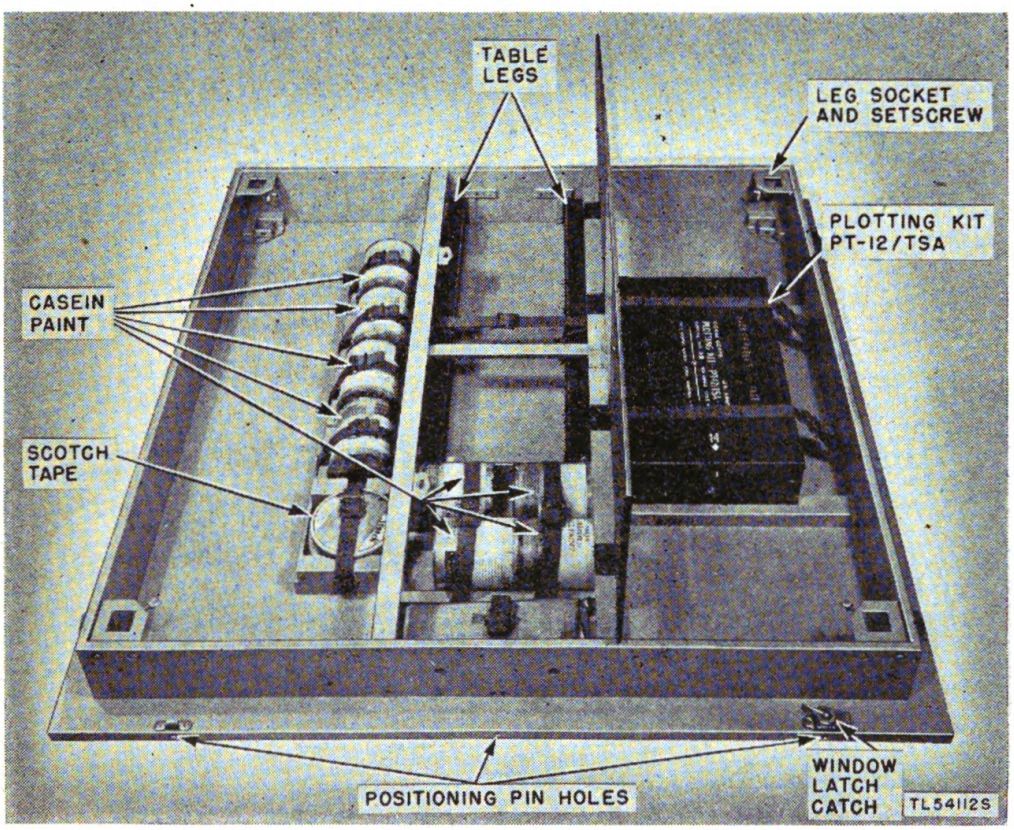


Figure 2. Plotting Table FN-4/TSA, bottom view.

6. PLOTTING TABLE FN-8/TSA.

Plotting Table FN-8/TSA is similar to Plotting Table FN-4/TSA. The only difference between the two plotting tables is in the position of the compartments and straps holding the miscellaneous parts packed beneath the table.

7. CASE CY-394/TSA.

Case CY-394/TSA is identical in construction to Case CY-327/TSA (par. 4). Two each Plotting Table FN-9/TSA are packed in Case CY-394/TSA.

8. PLOTTING TABLES FN-9/TSA.

Plotting Table FN-9/TSA is similar in construction to Plotting Table FN-4/TSA (par. 5) and FN-8/TSA. The only difference among the plotting tables is in the position of the compartments and straps holding the miscellaneous parts packed beneath the table. Only one Plotting Table FN-9/TSA has plotting equipment packed beneath it.

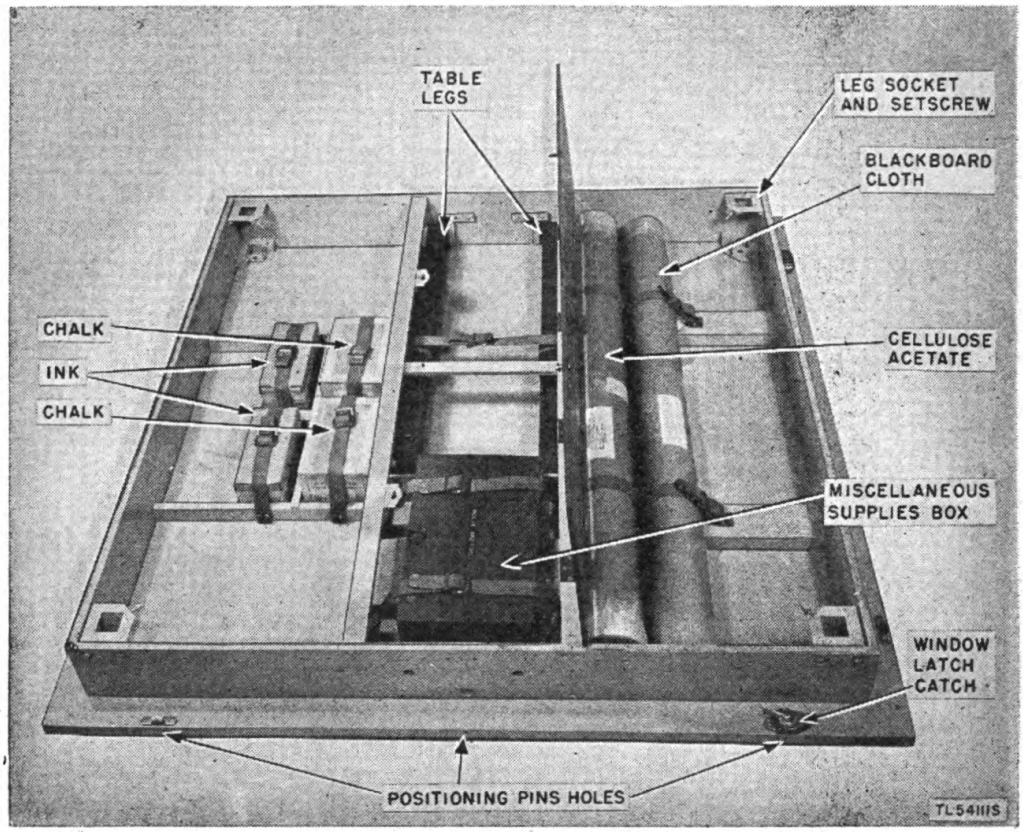


Figure 3. Plotting Table FN-8/TSA, bottom view.

9. CASE CY-283/TTQ.

a. Case CY-283/TTQ is hinged on the 4-foot dimension and when opened up forms a platform 4 feet square. The legs are removable and fit into sockets in the four corners to form a 4-foot high platform. A setscrew in each socket holds the leg rigidly. Cross-bracing between legs is provided at each end. On the front and rear sides,

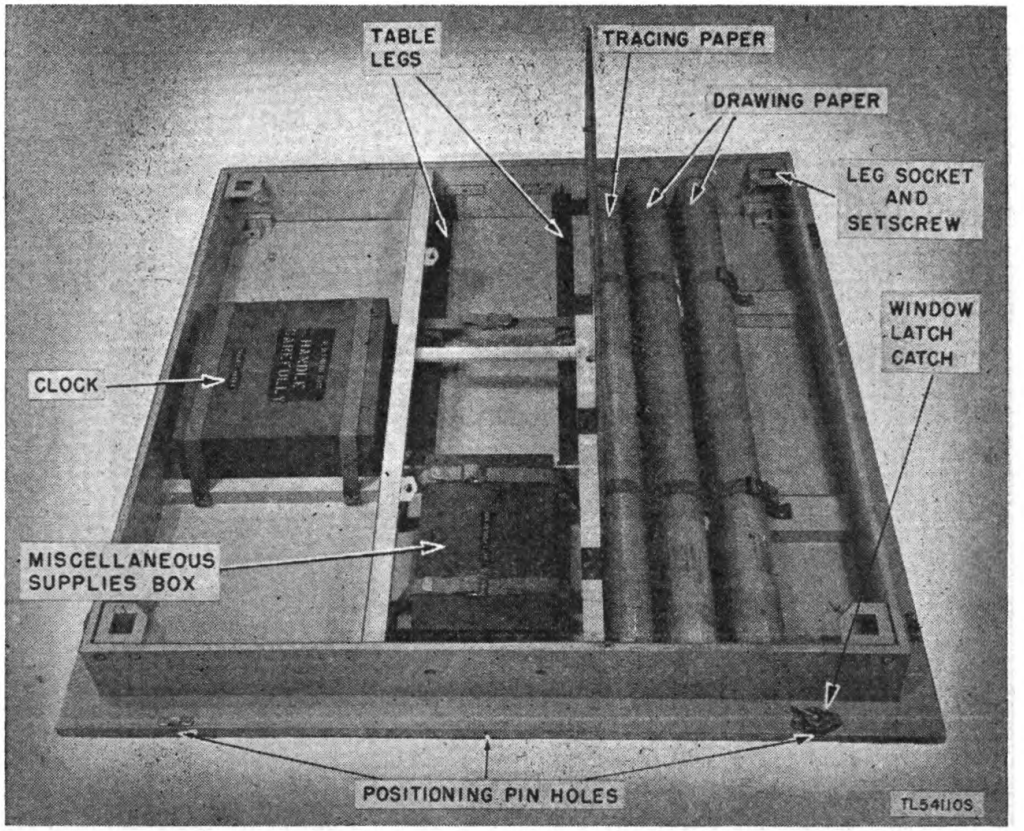


Figure 4. Plotting Table FN-9/TSA, bottom view.

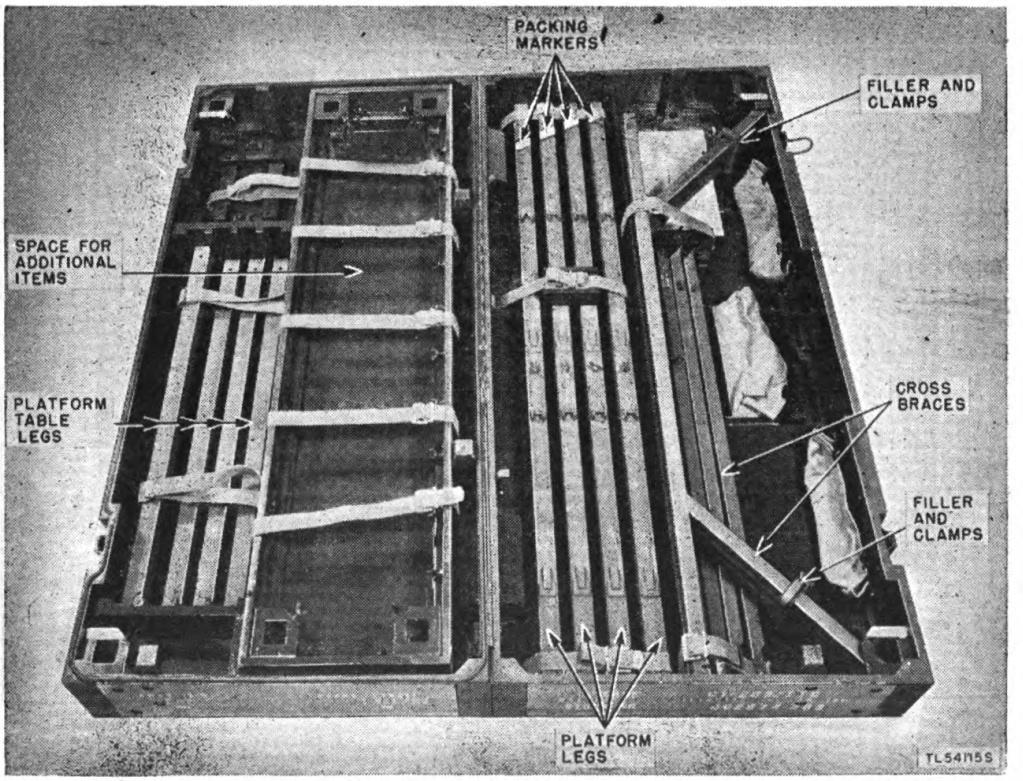


Figure 5. Platform Case CY-283/TTQ open.

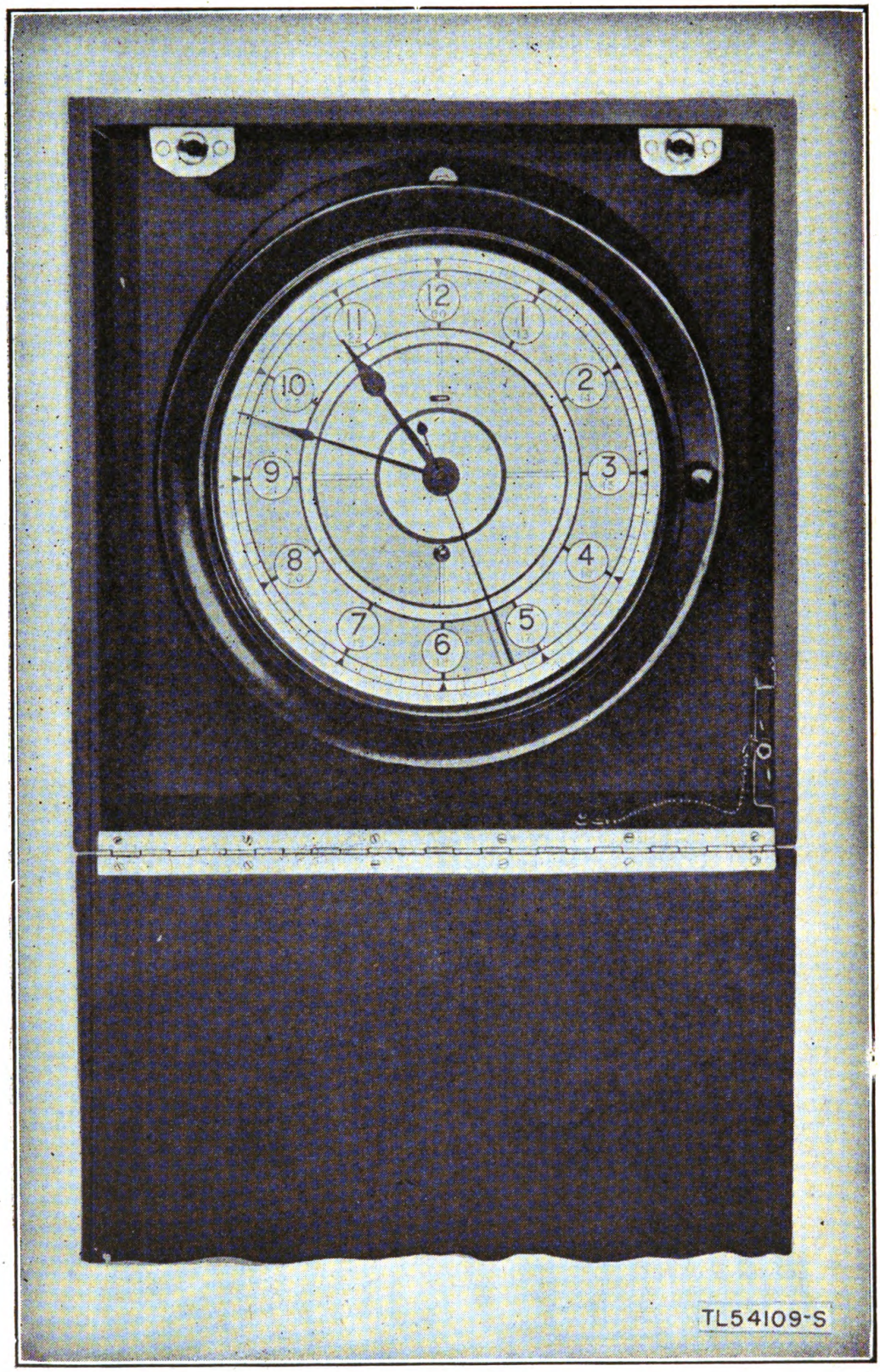


Figure 6. Clock.

Figure 7. Plotting Kit PT-12/TSA-1.

Figure 8. Plotting Kit PT-12/TSA-1 opened.

cross-bracing is provided from each leg to the center of the platform in order to take the strain off the hinged portion. Two braces between legs of one end serve as steps for climbing onto the platform.

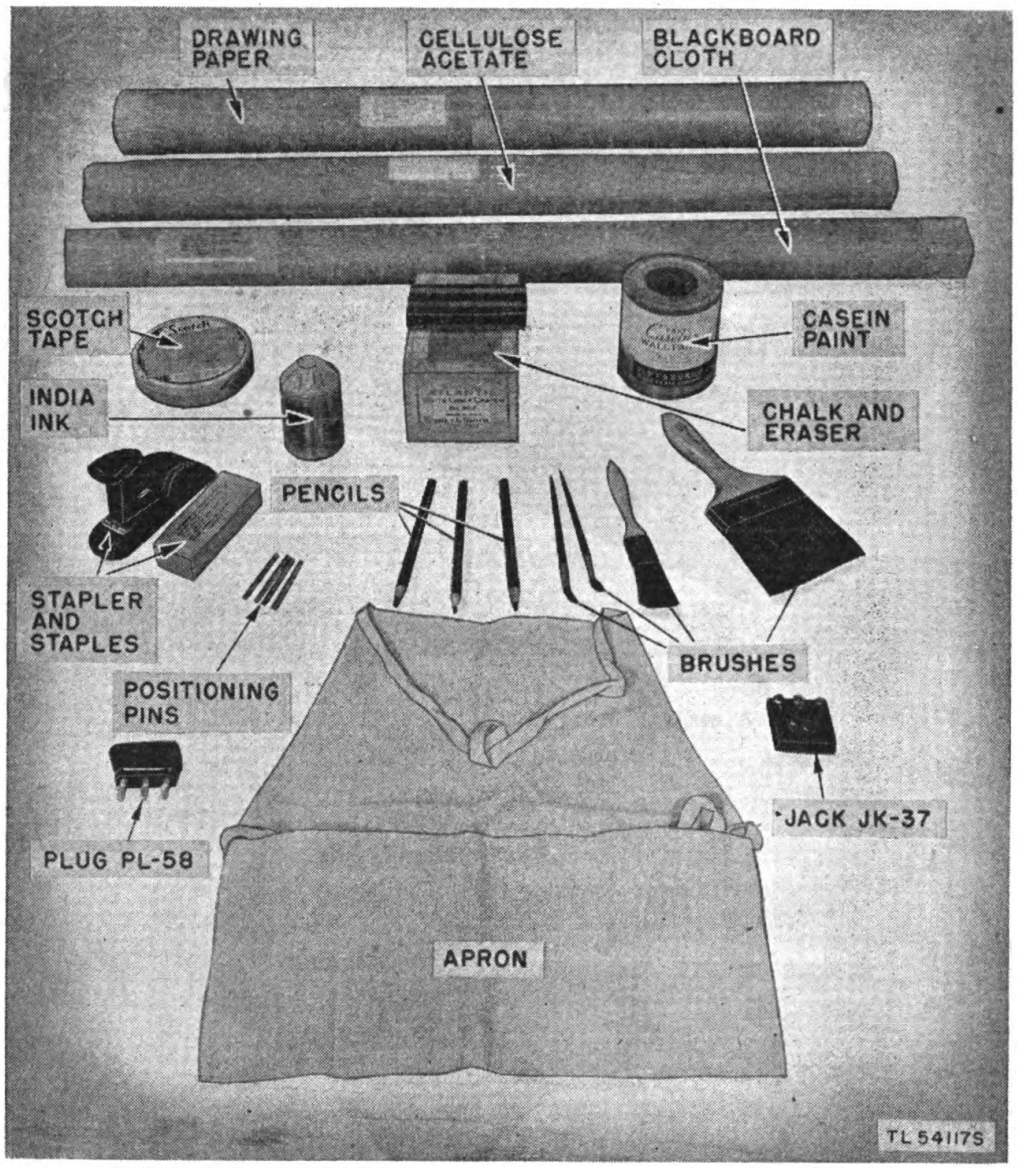


Figure 9. Miscellaneous plotting equipment.

b. Platform Table FN-2/TTQ has removable legs which fit into sockets in the four corners. A setscrew in each socket holds the leg rigidly. Platform Table FN-2/TTQ is 3 feet 10 inches long, 12 inches wide, and stands 28 inches high. The table may be stored inside the platform when packed for shipment. The finish of the woodwork and hardware on the platform and platform table resists the effect of adverse temperature and humidity. The entire platform and platform table is finished in lusterless olive drab.

10. CLOCK.

A 10-inch, hand-wound, spring-driven clock is provided. The clock has a sweep second hand. It has a plastic crystal to eliminate the danger of breakage and is shock-mounted in a moistureproof case. A mounting bracket is provided at the back of the case for wall mounting and a key for winding the clock is fastened by a suitable length of chain to the side of the case.

11. PLOTTING KIT PT-12/TSA-1.

Plotting Kit PT-12/TSA-1 consists of plotting markers located in compartments in three nesting trays held together by catch fasteners. The plotting kit contains target display stands, number disks, and plotting pips. This equipment is used to plot the path of friendly and hostile aircraft on the plotting tables.

12. JACKS AND PLUGS.

Fifteen Jacks JK-37 and 15 Plugs PL-58 are provided to furnish facilities for connecting additional handsets and chest sets as desired. Jack JK-37 is a three-contact jack which accommodates Plug PL-58. Plug PL-58 is a three-prong molded plug which fits into the socket of Telephone EE-8-( ) or Jack JK-37.

13. MISCELLANEOUS PLOTTING EQUIPMENT.

Miscellaneous plotting equipment consists of casein paint in white, green, and blue colors, varnish brushes of various sizes for painting maps on the plotting tables, a roll of clear plastic overlay, and China pencils in various colors. A blackboard cloth, chalk, and eraser are included for use as a situation board or status board. The carpenter aprons contain pockets to hold the plotting pips and number disks of the plotting kit.

SECTION II

INSTALLATION AND ASSEMBLY

14. SITING.

Select a location for an AAOR capable of meeting the following conditions:

a. Tactical and operating requirements.

b. Sufficient floor space to comfortably locate the equipment.

c. A ceiling height of at least 9 feet.

d. Adequate accessibility, floor strength, and ventilating arrangements.

e. Availability of radio and telephone communications.

15. UNPACKING, UNCRATING, AND CHECKING.

a. The table of components (par. 3) gives a complete list of parts provided with Plotting Equipment AN/TSA-1. A packing label in each plotting table and in the platform case shows a detailed listing of the contents and the parts location for transportation. Table I below gives the weights and dimensions of Plotting Equipment AN/TSA-1, export packed.

b. Place the packing cases as near to the operating location as possible.

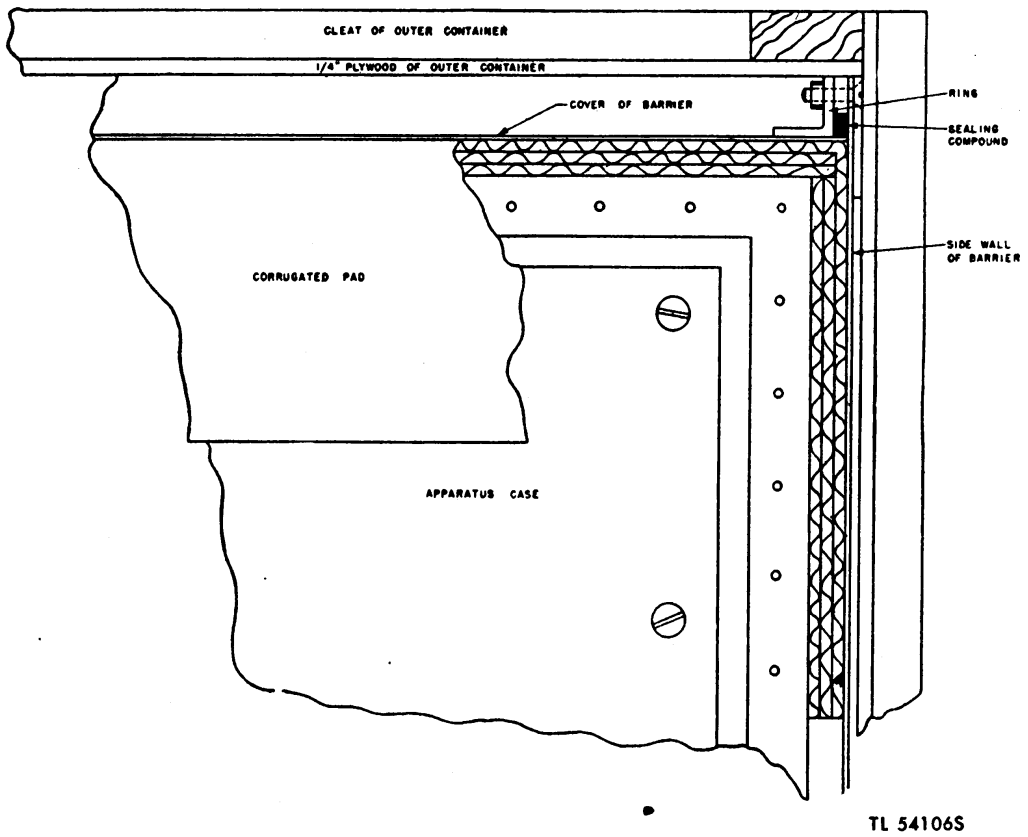


Figure 10. Cutaway view of packing.

c. Remove the nails, using a nail puller, and remove the sides of the packing case. Prying off the sides may result in damage to the equipment.

d. Remove the top of the packing case and all protective wrappings.

e. Open the protective metal barrier as follows:

(*1*) Remove all screws.

(*2*) Place screwdriver between the barrier side wall and ring, and pry the ring out by repeating the operation at several points around the sides of the metal barrier.

(*3*) Pry out the top cover of the metal barrier.

f. Turn the metal barrier over on its open end and raise it upward and off the case.

g. Separate the plotting table cases and their component plotting tables as follows:

(*1*) Set the plotting table case on edge so that the two end pieces, each forming half of the case cover, have their 4-foot dimensions horizontal to the floor.

(*2*) Loosen the wing bolts in the case handle assemblies which hold the end pieces in place. Remove the top end piece. Do not remove the wing bolts that hold the case handles to the table aprons at this time.

(*3*) Invert the case, and remove the other end piece.

(*4*) Remove the wing bolts holding the case handles to the table aprons.

(*5*) Lay each plotting table flat on the floor with the table top surface down.

CAUTION: Take great care to avoid damaging the table top surface. Lay the table on a pad if possible.

h. Unsnap the trunk clasps on Case CY-283/TTQ, open the case, and lay it flat on the floor.

i. Open the straps and remove all parts packed on the under side of the plotting tables and platform. Inspect the components visually for damage and check them against the packing label on each table.

TABLE I

PLOTTING EQUIPMENT AN/TSA-1, EXPORT PACKED

Case No.	Weight (lb)	Dimensions (in.)	Volume (cu ft)
1	492	53 x 52 x 16	25.4
2	450	53 x 52 x 16	25.4
3	259	53 x 28 x 16	13.7

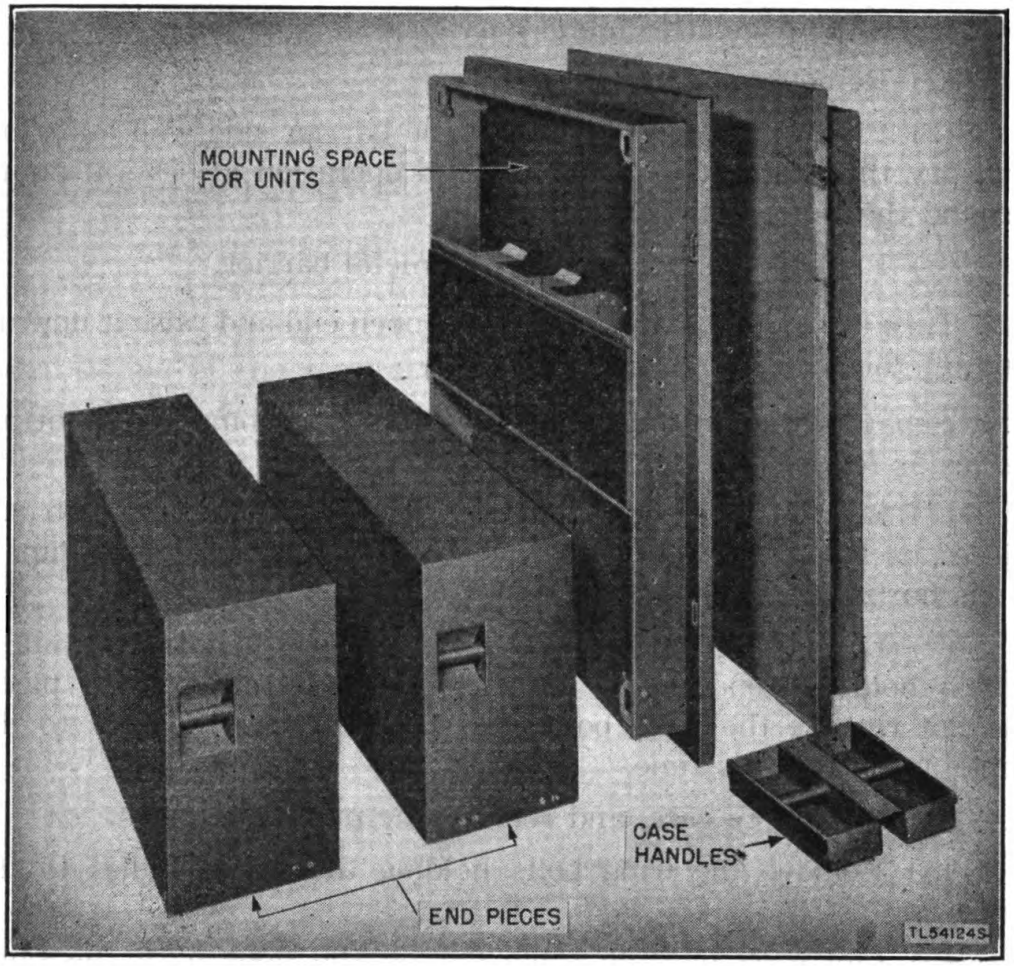


Figure 11. Plotting table case disassembled.

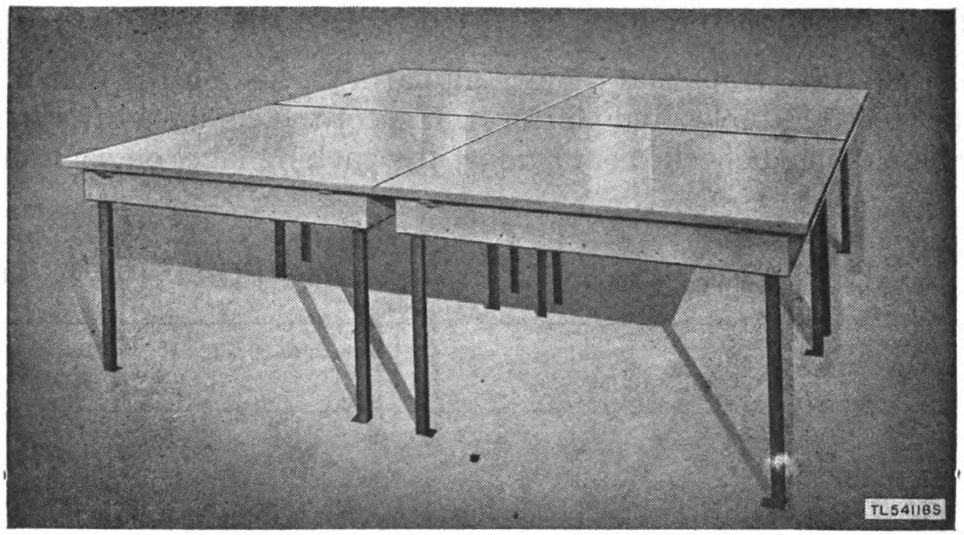


Figure 12. Plotting tables assembled.

16. ASSEMBLY OF PLOTTING TABLES.

a. Insert the table legs into the table sockets and tighten the setscrews. Set the legs into the sockets so that the projection on the base of each leg points inward.

b. Invert the tables to their normal position.

c. Place the positioning pins (found in the miscellaneous supplies box in case No. 1) in the holes in a side of one of the table tops. Place the other table adjacent to the first table and fit the holes in the edge of the table top over the pins. This will keep the table edges even with each other.

d. Clamp the tables together using the window latch catches found on the under edge of the table top.

e. Set up the four plotting tables as shown in figure 12.

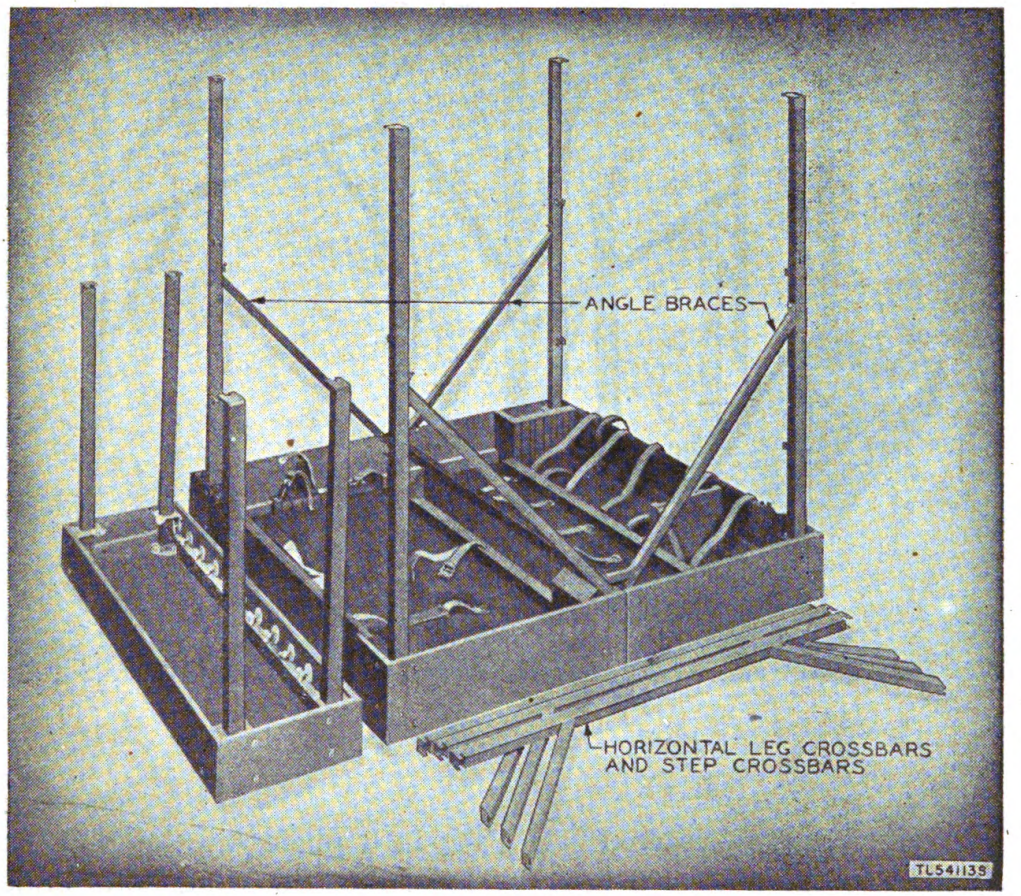


Figure 13. Platform and platform table with table legs and angle braces in place.

17. ASSEMBLY OF PLATFORM AND PLATFORM TABLE FN-2/TTQ.

a. Set both the platform and the platform table legs into their sockets, tightening them in place with the socket setscrews.

b. Place the angle braces between the platform and the legs.

c. Bolt the cross strap between each set of angle braces.

d. Invert the platform to the normal position on its legs.

e. Place a horizontal crossbar between the platform legs across each end of the platform. Place an extra crossbar between the legs on one end to serve as a step.

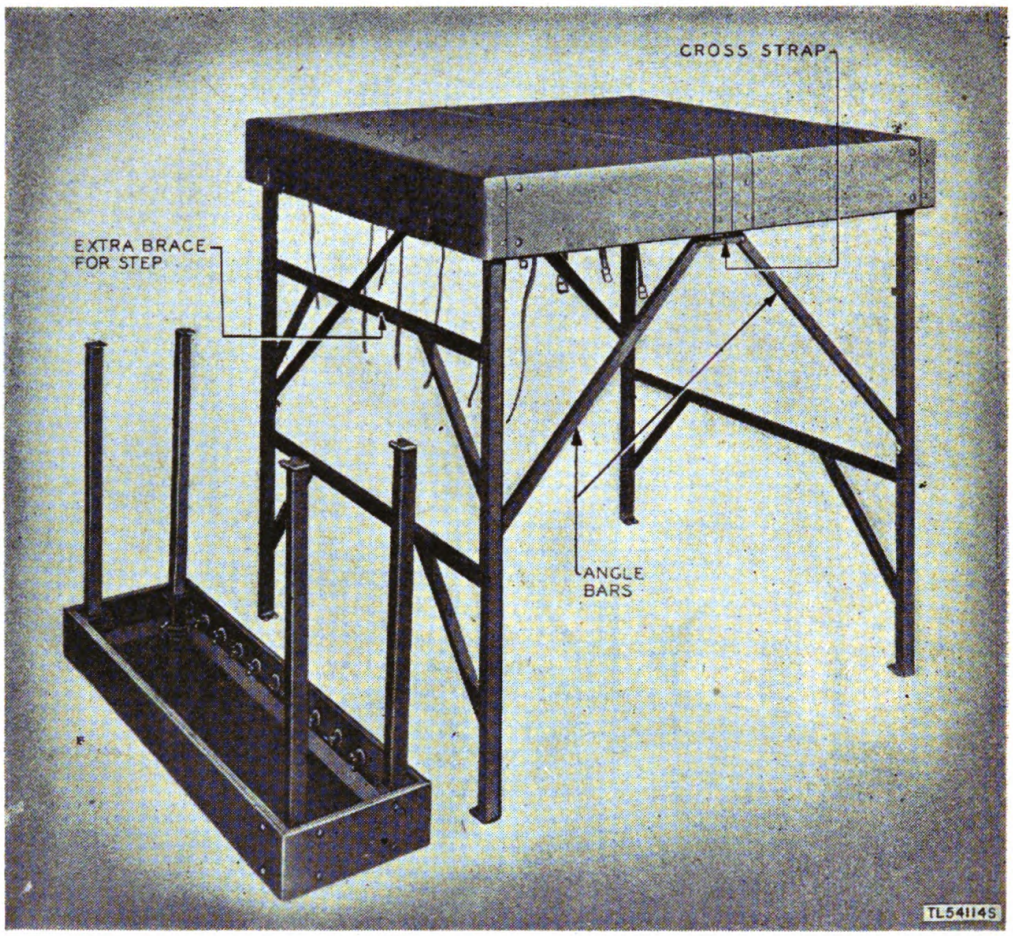


Figure 14. Platform set up.

f. Lift Platform Table FN-2/TTQ into place on the platform. Fasten it to the platform floor by loosening the wing bolts underneath the platform floor until the boltheads projecting on the top of the platform floor can be inserted in the leg base slots of the platform table. Tighten the wing bolts to hold the platform table in place.

g. An end piece from either of the plotting table cases may be placed on the platform to serve as a bench.

18. PACKING FOR TRANSPORTATION.

a. General. When the AAOR is to be dismantled and packed for transportation follow a procedure generally in reverse of the assembly procedure.

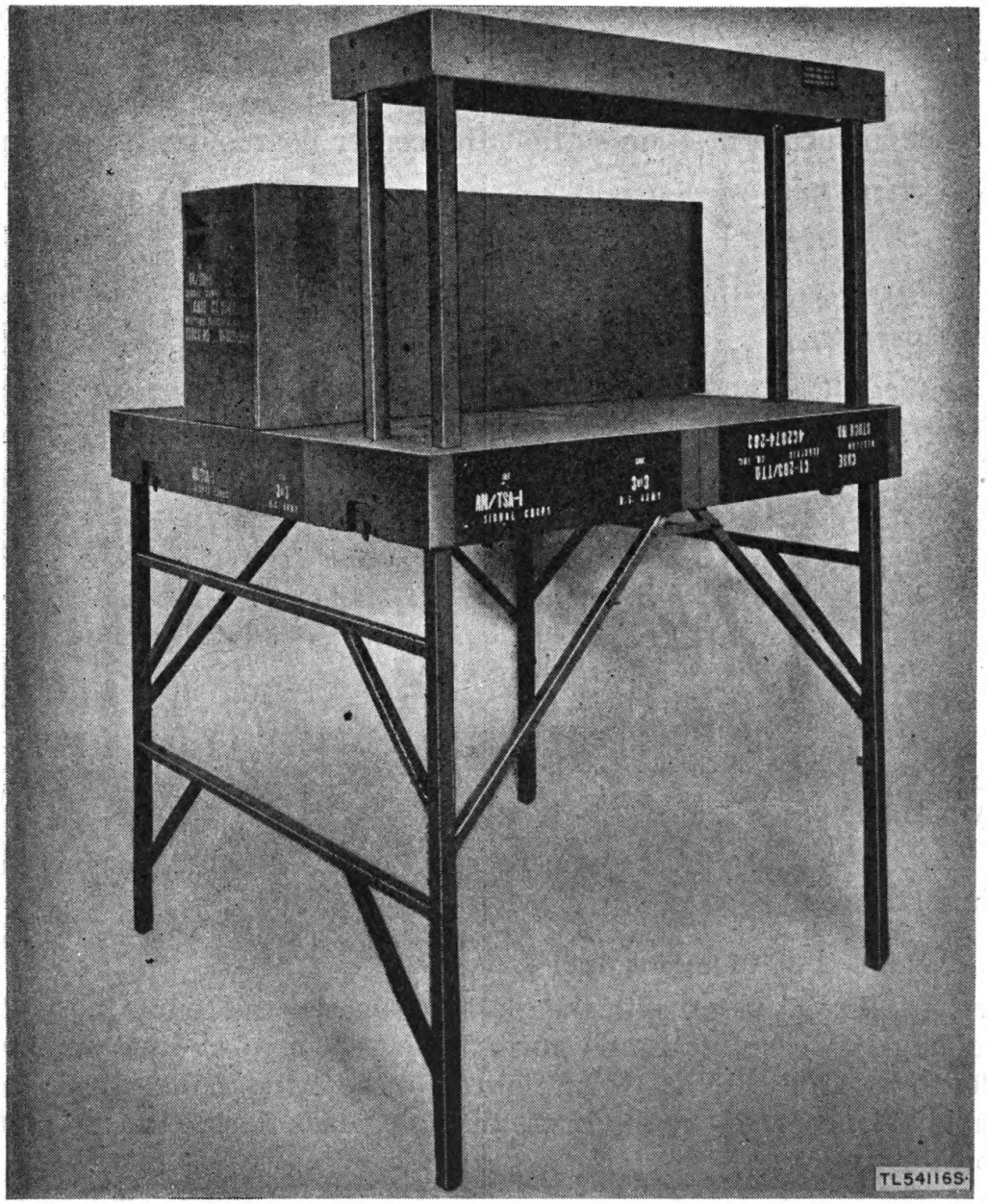


Figure 15. Complete platform assembly.

b. Plotting Tables.

(*1*) Loosen the window latch catches under the table tops that fasten the plotting tables together.

(*2*) Remove the positioning pins that keep the table tops level.

(*3*) Repack the plotting equipment in each plotting table in accordance with the positions indicated on the packing labels. Strap them tightly in place.

(*4*) Place the table legs in their packing position and strap them tightly in place.

(*5*) Fasten the hinged center board to the under side of the table.

(*6*) Place two tables on edge with the table top surfaces together in such a position so that the center boards are horizontal.

NOTE: Be sure that both tables are marked as part of the same case.

(*7*) Fasten the case handles to the table aprons using the thumbscrews.

(*8*) Fit an end piece over the upper half of the two plotting tables.

CAUTION: The long sides of the end pieces bow in. Therefore, when the end pieces are assembled on the plotting tables the long sides should be pulled out. Thus, when the end pieces are dropped into place the details on the inside of the end pieces will not snag on the contents packed on the under side of the plotting table.

(*9*) Invert the two plotting tables, now partially held together by one end piece and the two case handles. Fit the second end piece over the exposed half of the tables.

(*10*) Fasten the two end pieces to the case handles using the thumbscrews.

c. Platform and Platform Tables.

(*1*) From underneath the platform, loosen the four wing bolts holding the base of the platform table legs in place and remove Platform Table FN-2/TTQ. Tighten these wing bolts when the table has been removed to bring the bolt heads flush with the platform casing.

(*2*) Invert the platform and platform table on the floor with the legs sticking up.

(*3*) Detach the platform leg cross braces and remove all table and platform legs by loosening the leg socket setscrews.

(*4*) Unscrew the wingnut and withdraw the bolt from one end of each strap which holds the platform angle braces together. Swing each strap so that the bolt may be reinserted to hold the

strap detail in place against one of the angle braces and place the wingnut back tightly on the bolt.

(5) Place Platform Table FN-2/TTQ, legs, and platform cross-braces in position inside the case and fasten them tightly in place using the web straps provided.

(6) Place the platform legs in position so that the paint mark on each leg forms a diagonal stripe across the top of the four legs.

(7) Shut Case CY-283/TTQ and close the trunk clasps.

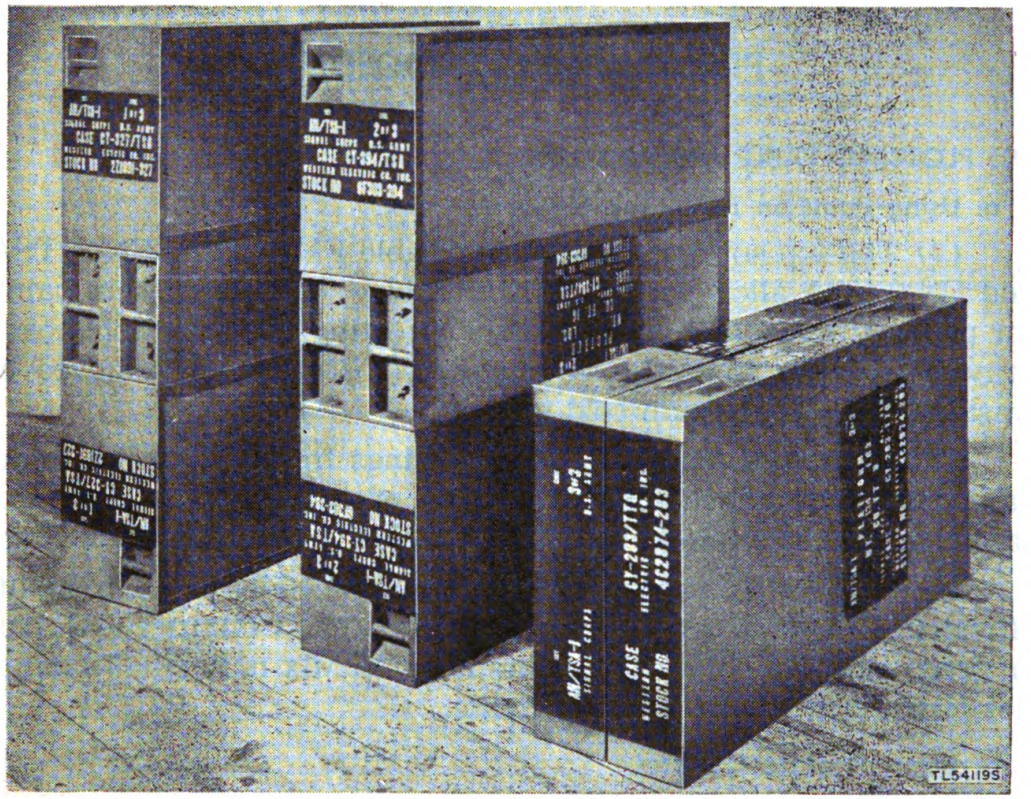


Figure 16. Plotting Equipment AN/TSA-1, packed for transportation.

PART TWO

OPERATING INSTRUCTIONS

NOTE: For information on destroying this equipment to prevent enemy use, see destruction notice at the front of this manual.

SECTION III

PRELIMINARY PROCEDURE

19. PLOTTING TABLE PREPARATION.

a. Using Paint on Table Top Surface.

(*1*) The top surfaces of Plotting Table FN-4/TSA, FN-8/TSA, and FN-9/TSA allow the use of white, blue, or green casein paints for painting maps and grids without affecting the table top's basic gray finish. The maps can be changed, corrected, or removed by washing the surface with cold water.

(*2*) When the map and grid markings for the plotting tables have been determined, open the cans of white, green, and blue casein paint and remove the paint brushes from their wrappings.

(*3*) Prepare a mixture of about 1 pint of white paint to 2 pints of water. Tint small quantities of this white paint mixture with blue or green paint to obtain the colors desired. Mix only small quantities of paint at a time to avoid waste.

b. Using Acetate Overlay.

(*1*) A 50-foot roll of clear acetate overlay 40 inches wide is provided.

(*2*) If it is desired to use this overlay on the plotting map, tear off a length of sufficient size to cover the map.

(*3*) Place the overlay on top of the map. The overlay provides a smooth, clean surface suitable for plotting marks made with the China pencils.

(*4*) Fasten the overlay to the plotting table, using Scotch tape or staples around its edges.

20. STATUS OR SITUATION BOARD PREPARATION.

A blackboard cloth, 48 inches long by 40 inches wide, is provided with the equipment and when suitably mounted may be used as

either a status or situation board. Secure a board of sufficient length and width, and staple the blackboard cloth to its surface. Secure chalk of desired colors from the chalk boxes supplied and keep the chalk and the eraser convenient to the improvised blackboard.

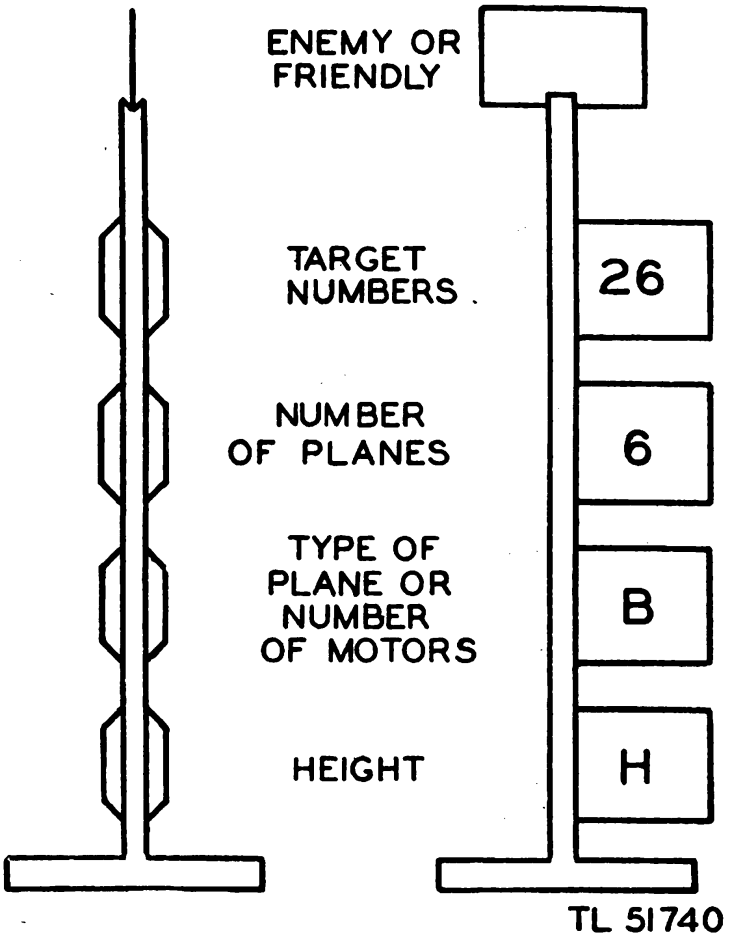


Figure 17. Target display stand.

21. PREPARING CLOCK FOR USE.

a. Setting Clock. To use the clock move the minute hand in either direction until the correct time is shown. The clock should be checked with a timepiece known to be correct, and checked again after 24 hours.

b. Regulating Clock. Should the clock run fast or slow, adjust it as follows:

(*1*) Move the micrometer regulator disk which projects through a slot in the dial toward S to make the clock run slower, or toward F to make the clock run faster.

(*2*) Moving one notch on the disk past the index on the dial will change the time keeping approximately 2.4 seconds per day.

c. Winding Clock. The clock, when fully wound will run for 8 days. When winding the clock remove the key to allow the sweep second hand to pass.

d. Locating Clock. Locate the clock in a position convenient to the plotting tables so that its face is in full view of the plotters.

22. PREPARING PLOTTING KIT FOR USE.

Plotting Kit PT-12/TSA-1 contains material required to trace the airplanes flight on the plotting table. It contains display stands, arrows, and colored, numbered, and lettered cards.

a. Display Stands. The target display stand has nine clips. Figure 17 illustrates the locations of the various colored, numbered, and lettered cards in the display stand to convey the necessary intelligence.

b. Arrows. The colored arrows are used to show the course of the plane. The arrows are removed from the plotting kit case and are carried in the pockets of the aprons, placing all the arrows of one color in the same pocket.

SECTION IV

OPERATION OF PLOTTING EQUIPMENT AN/TSA-1

23. TACTICAL OPERATION.

The operation of Plotting Equipment AN/TSA-1 is tactical. For a complete discussion of the procedures to be followed for the operation of an AAOR see FM 44-8, Antiaircraft Operations Room and Antiaircraft Artillery Intelligence Service, and FM 11-25, Aircraft Warning Service, and changes thereto.

PART THREE

MAINTENANCE INSTRUCTIONS

SECTION V

PREVENTIVE MAINTENANCE PROCEDURES

24. MEANING OF PREVENTIVE MAINTENANCE.

Preventive maintenance is a systematic series of operations performed periodically on equipment in order to maintain top efficiency in performance. To understand what is meant by preventive maintenance, it is necessary to distinguish between preventive maintenance and trouble shooting and repair. The primary purpose of preventive maintenance is to *prevent* break-downs, and therefore, the need for repair. The prime function of trouble shooting and repair is to locate and correct *existing* defects. The importance of preventive maintenance cannot be overemphasized. The entire aircraft warning system depends upon each part of that system being at peak operating efficiency at all times.

25. DESCRIPTION OF PREVENTIVE MAINTENANCE TECHNIQUES.

Most of the parts of this plotting equipment require routine preventive maintenance. This section of the manual contains specific instructions, and serves as a guide for personnel assigned to perform the six basic maintenance operations, namely: Feel, Inspect, Tighten, Clean, Adjust, and Lubricate. Throughout this manual the lettering system for the six operations will be as follows:

F—Feel*	C—Clean
I—Inspect	A—Adjust
T—Tighten	L—Lubricate*

26. INSTRUCTIONS.

a. General. Preventive maintenance work on the parts of Plotting Equipment AN/TSA-1 consists of Inspect (I), Clean (C), and Adjust (A).

*The Feel and Lubricate operations are inapplicable to this equipment.

b. Inspect (I). Inspect the table top surface for cracks, scratches, signs of warping, accumulation of dirt, and rough spots. Inspect the crystal and dial of the clock for dirt. Inspect the hinges for rust. Perform these operations weekly. Inspect the wing bolts and setscrews on the platform, platform table, and plotting tables daily for tightness.

c. Tighten (T). Tighten the setscrews on the plotting table leg sockets. Tighten the wing bolts on the platform and platform table.

d. Clean (C). Remove casein paint from the table top surface when map is no longer required. Rub a cloth that has been immersed in cold water over the table top surface to remove paint. Remove rust from hinges by cleaning them with Solvent, Dry Cleaning.

> **NOTE:** Gasoline will not be used as a cleaning fluid for any purpose. Solvent, Dry Cleaning, is available as a cleaning fluid through established supply channels. Oil, Fuel, Diesel, may be used for cleaning purposes when dry-cleaning solvent (SD) is not on hand. Carbon tetrachloride will be used as a cleaning fluid only in the following cases: when inflammable solvents cannot be used because of the fire hazard, and for cleaning electrical contacts including relay contacts, plugs, commutators, etc.

e. Adjust (A). The clock will require adjustment if it is found to be running slow or fast. Adjust as described in paragraph 21b.

SECTION VI

LUBRICATION

NOTE: Lubrication is not required for Plotting Equipment AN/TSA-1.

SECTION VII

MOISTUREPROOFING AND FUNGIPROOFING

NOTE: Moistureproofing and fungiproofing treatment is not required for Plotting Equipment AN/TSA-1.

PART FOUR

AUXILIARY EQUIPMENT

(NOT USED)

PART FIVE

REPAIR INSTRUCTIONS

NOTE: Failure or unsatisfactory performance of equipment used by Army Ground Forces and Army Service Forces will be reported on W.D., A.G.O. Form No. 468 (Unsatisfactory Equipment Report); by Army Air Forces, on Army Air Forces Form No. 54 (Unsatisfactory Report). If either form is not available, prepare the data according to the sample form reproduced in figure 18.

SECTION VIII

REPAIR

27. GENERAL REPAIR.

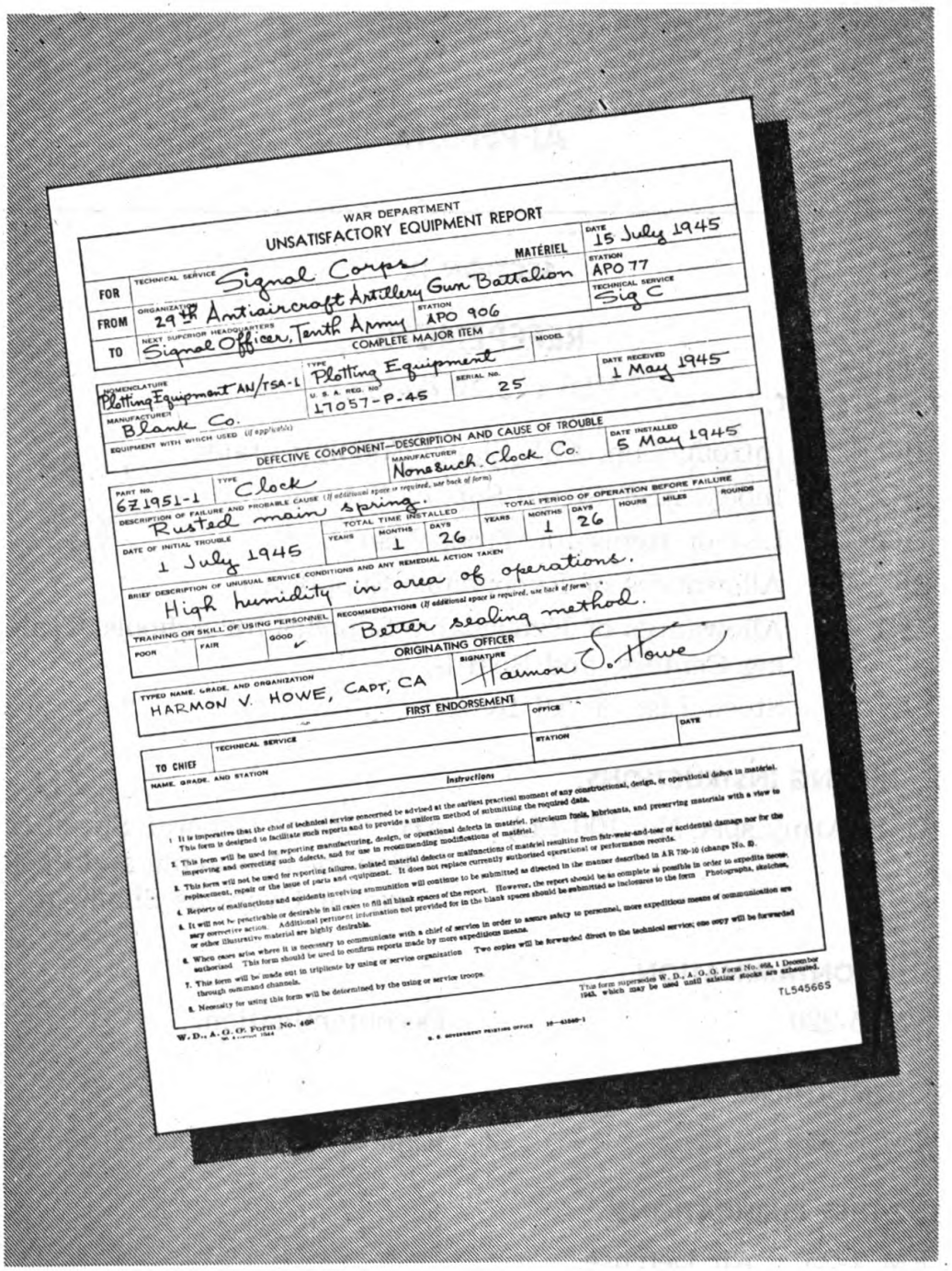
No special repair instructions are required for the items of this equipment except for painting and refinishing the plotting table top surface. When a touch-up job is necessary, apply paint with a small brush. When numerous scratches and scars on the surface warrant complete repainting, paint may be sprayed over the entire surface.

28. UNSATISFACTORY EQUIPMENT REPORT (fig. 18).

a. When trouble in equipment used by Army Ground Forces or Army Service Forces occurs more often than repair personnel feel is normal, Unsatisfactory Equipment Report W.D., A.G.O. Form No. 468 should be filled out and forwarded through channels to the Office of the Chief Signal Officer, Washington 25, D. C.

b. When trouble in equipment used by Army Air Forces occurs more often than repair personnel feel is normal, Army Air Forces Form No. 54 should be filled out and forwarded through channels.

c. If either form is not available, prepare the data according to the sample form reproduced in figure 18.



WAR DEPARTMENT

UNSATISFACTORY EQUIPMENT REPORT

FOR: TECHNICAL SERVICE: Signal Corps — MATÉRIEL — DATE: 15 July 1945

FROM: ORGANIZATION: 294th Antiaircraft Artillery Gun Battalion — STATION: APO 77

TO: NEXT SUPERIOR HEADQUARTERS: Signal Officer, Tenth Army — STATION: APO 906 — TECHNICAL SERVICE: Sig C

COMPLETE MAJOR ITEM

NOMENCLATURE: Plotting Equipment AN/TSA-1 — TYPE: Plotting Equipment — MODEL:

U. S. A. REG. NO.: 17057-P-45 — SERIAL NO.: 25 — DATE RECEIVED: 1 May 1945

MANUFACTURER: Blank Co.

EQUIPMENT WITH WHICH USED (if applicable)

DEFECTIVE COMPONENT—DESCRIPTION AND CAUSE OF TROUBLE

PART NO.: 6Z1951-1 — TYPE: Clock — MANUFACTURER: None Such Clock Co. — DATE INSTALLED: 5 May 1945

DESCRIPTION OF FAILURE AND PROBABLE CAUSE (If additional space is required, use back of form): Rusted main spring.

TOTAL TIME INSTALLED: YEARS — MONTHS: 1 — DAYS: 26

TOTAL PERIOD OF OPERATION BEFORE FAILURE: YEARS — MONTHS: 1 — DAYS: 26 — HOURS — MILES — ROUNDS

DATE OF INITIAL TROUBLE: 1 July 1945

BRIEF DESCRIPTION OF UNUSUAL SERVICE CONDITIONS AND ANY REMEDIAL ACTION TAKEN: High humidity in area of operations.

TRAINING OR SKILL OF USING PERSONNEL: POOR — FAIR — GOOD ✓

RECOMMENDATIONS (If additional space is required, use back of form): Better sealing method.

ORIGINATING OFFICER

TYPED NAME, GRADE, AND ORGANIZATION: HARMON V. HOWE, CAPT, CA — SIGNATURE: Harmon V. Howe

FIRST ENDORSEMENT

TO CHIEF — TECHNICAL SERVICE — OFFICE — STATION — DATE

NAME, GRADE, AND STATION

Instructions

1. It is imperative that the chief of technical service concerned be advised at the earliest practical moment of any constructional, design, or operational defect in materiel. This form is designed to facilitate such reports and to provide a uniform method of submitting the required data.
2. This form will be used for reporting manufacturing, design, or operational defects in materiel, petroleum fuels, lubricants, and preserving materials with a view to improving and correcting such defects, and for use in recommending modifications of materiel.
3. This form will not be used for reporting failure, isolated material defects or malfunctions of materiel resulting from fair-wear-and-tear or accidental damage nor for the replacement, repair or the issue of parts and equipment. It does not replace currently authorized operational or performance records.
4. Reports of malfunctions and accidents involving ammunition will continue to be submitted as directed in the manner described in AR 750-10 (change No. 2).
5. It will not be practicable or desirable in all cases to fill all blank spaces of the report. However, the report should be as complete as possible in order to expedite necessary corrective action. Additional pertinent information not provided for in the blank spaces should be submitted as inclosures to the form. Photographs, sketches, or other illustrative material are highly desirable.
6. When cases arise where it is necessary to communicate with a chief of service in order to assure safety to personnel, more expeditious means of communication are authorized. This form should be used to confirm reports made by more expeditious means.
7. This form will be made out in triplicate by using or service organization. Two copies will be forwarded direct to the technical service; one copy will be forwarded through command channels.
8. Necessity for using this form will be determined by the using or service troops.

This form supersedes W. D., A. G. O. Form No. 468, 1 December 1943, which may be used until existing stocks are exhausted.

W.D., A. G. O. Form No. 468

U. S. GOVERNMENT PRINTING OFFICE 16—41548-1

TL545665

Figure 18. Unsatisfactory Equipment Report with standard entries.

APPENDIX

SECTION IX

REFERENCES

29. PARTS LIST.

SIG 1	Introduction, ASF Signal Supply Catalog.
SIG 2	Index, ASF Signal Supply Catalog.
SIG 3	List of Items for Troop Issue.
SIG 4-1	Allowances of Expendable Supplies.
SIG 4-2	Allowances of Expendable Supplies for Schools, Training Centers, and Boards.
SIG 5	Stock List of All Items.

30. SHIPPING INSTRUCTIONS.

U. S. Army spec No. 100-14A.	Army-Navy General Specification for Packaging and Packing for Overseas Shipment.

31. DECONTAMINATION.

TM 5-220	Decontamination.

32. DEMOLITION.

TM 5-25	Explosives and Demolitions.

33. OTHER PUBLICATIONS.

FM 1-25	Air Defense.
FM 4-100	Organization and Tactics of Antiaircraft Artillery.
FM 4-102	Employment of Antiaircraft Artillery Automatic Weapons.
FM 4-104	Employment of Antiaircraft Artillery Guns.
FM 11-25	Aircraft Warning Service.

FM 21-6	List and Index of War Department Publications.
FM 21-25	Elementary Map and Aerial Photograph Reading.
FM 21-26	Advanced Map and Aerial Photograph Reading.
FM 21-80	Recognition Training.
FM 30-5	Combat Intelligence.
FM 30-10	Observation.
FM 44-8	Antiaircraft Operations Room and Antiaircraft Artillery Intelligence Service.

SECTION X

MAINTENANCE PARTS

34. MAINTENANCE PARTS FOR PLOTTING EQUIPMENT AN/TSA-1.

Maintenance parts are not authorized for Plotting Equipment AN/TSA-1.

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